

Center for the diagnosis of pathogens - Defense Wide

Proposed Recipient: Georgia State University

Address of Recipient: P.O. Box 3965; Atlanta, Georgia 30302-3965

Amount of Request: \$2.5 Million

Explanation of Request

Purpose: Successful development of a cell-based system that can be utilized to rapidly identify viruses through the use of infrared spectroscopy along with an artificial neural network trained for data interpretation. This project requires investigators working across the disciplines of virology, biophysics, computing information systems, microchip technology. The device will be portable and capable of monitoring a growing number of pathogens in a wide variety of circumstances from wounds to environmental reservoirs.

Why is it a good use of Taxpayer funds: Rapid identification of pathogens is critical for the implementation of effective measures to control the damage done by highly pathogenic agents. Rapid identification techniques classically require days, if not weeks, and include time to grow and expand the suspect agent. The technology we have developed is based on utilizing the responses of cells to identify the pathogen, understanding that every pathogen induces a unique signature within the target cell.